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THE PRESENT STATUS OF THE RECENTLY DESCRIBED GENUS, TEUSCHERIA

LESLIE A. GARAY

It was only recently that I established the genus *Teuscheria* in the American Orchid Society Bulletin on the basis of a collection from Ecuador by Mr. Henry Teuscher. While this paper was in the proof-reading stage, another new species, *T. venezuelana* which is described herewith, came into flower in Caracas in the collection of Mr. G. C. K. Dunsterville. This second species at once reminded me of a taxon described by Schlechter as *Bifrenaria Pickiana*. When I examined critically our material of *B. Pickiana* in the Orchid Herbarium of Oakes Ames, I was surprised to find that it also has the characters of my new genus. Thus within a few months our knowledge of the monotypic genus *Teuscheria*, through the discovery of two additional species, was enlarged both as to number of species and as to their distribution.

All species of *Teuscheria* are epiphytic in habit. The primary stem or rhizome is elongated and completely beset with imbricating sheaths which at an early stage break down into numerous, fibrous segments. The pseudobulbs are either aggregated or more or less remote and are hidden by three layers of scarious cataphylls. These cataphylls tightly enclose the developing pseudobulbs and, as was observed by Mr. Teuscher, they expand together with the pseudobulbs. During the process of expansion, the outer two layers soon wither and also break up into fibres,

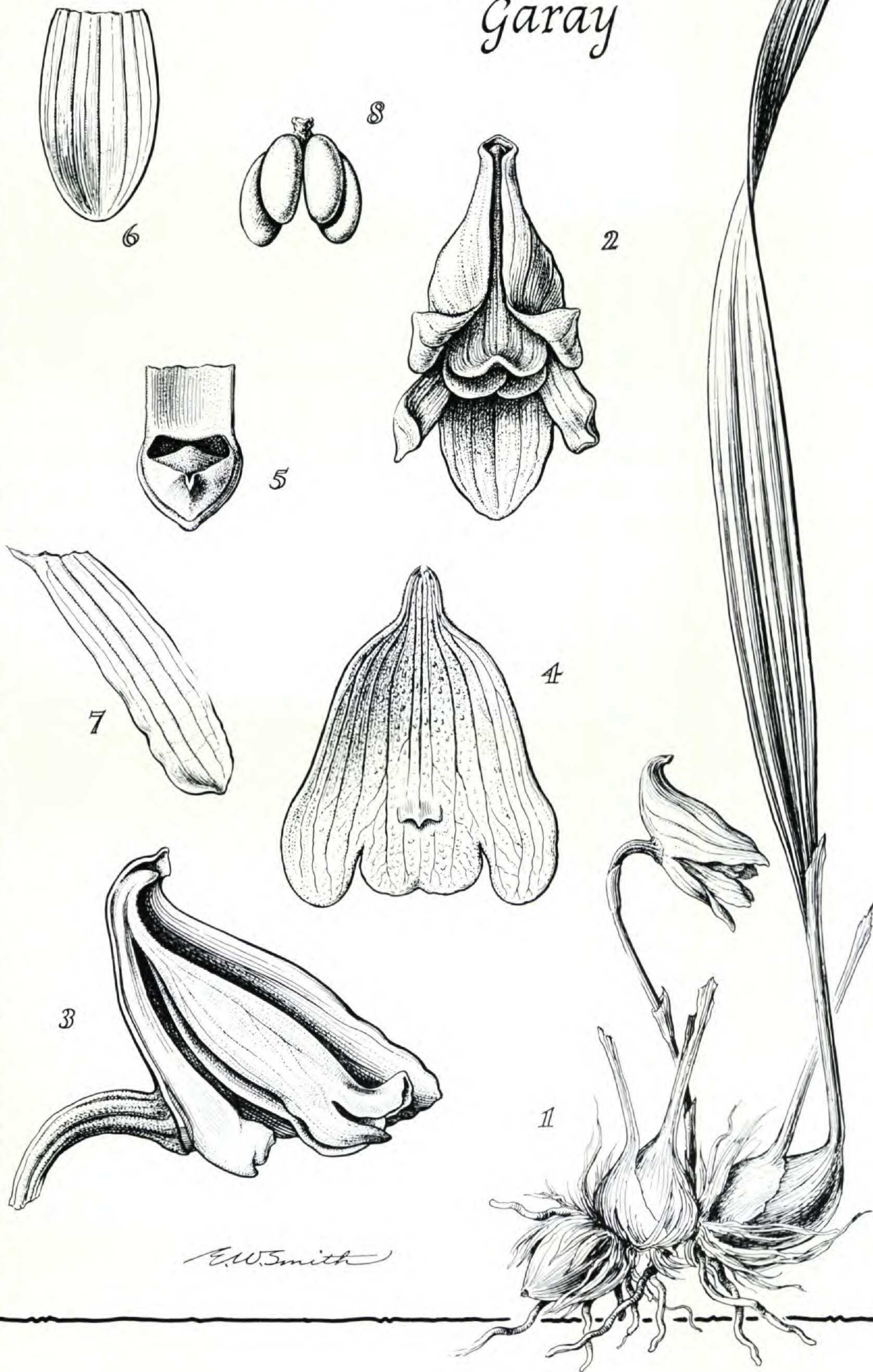
giving a brush-like appearance to the pseudobulbs. The innermost layer seems to remain persistent and it encloses not only the pseudobulb but the basal portion of the petiolate leaf as well. The pseudobulbs are relatively small, pyriform in shape and are terminated by a single leaf. It is noteworthy to mention that the pseudobulb is not articulate with the petiole of the leaf but is continuous with it. The persistent leaves are rather thin in texture, elongate with a prominent petiole. The blade itself is distinctly but not prominently plicate, oblong-ligulate, with a sharply acute or subacuminate apex. The inflorescence is always one-flowered and borne laterally at the base of the pseudobulb, either of the recent year's growth or that of the previous year. The slender peduncle is either erect or pendent and adorned with a number of remote sheaths. The relatively large flowers are exceedingly interesting because they are not resupinate, i.e. the lip is uppermost in position during anthesis. The non-resupinate position is attained through a 45° bend of the ovary, an unusual method seldom seen in the orchid family. The flowers, which are open only for 24 hours, show a few morphologically interesting points. The fleshy sepals and petals are either connivent or spreading; the lateral sepals are shortly connate just above the column-foot and form a small spur-like structure where the free tip of the column-foot, to which the base of the lip is firmly adnate, is enclosed. This free prolongation of the column-foot is apparently very prominent in *T. venezuelana*, while in *T. Pickiana* it is hardly produced. The large lateral lobes of the flabellate lip enfold the short, cylindrical column. The four pollinia are unequal in size, without a stipe, and are held together by a small amount of viscose matter at the tip of the rostellum.

When *Teuscheria* was published, a colleague wrote me that he considers *T. cornucopia* to be synonymous with *Bifrenaria Pickiana*, and that *Teuscheria* does not belong to the Phajaeae,

TEUSCHERIA CORNUCOPIA GARAY. Fig. 1. general habit of plant, slightly less than natural size; fig. 2. front view of flower, x $1\frac{3}{4}$; fig. 3. side view of flower with dorsal sepal, petals and one lateral sepal removed, x $1\frac{3}{4}$; fig. 4. lip expanded, x 2; fig. 5. the apex of the column, much enlarged; fig 6. dorsal sepal, x $1\frac{3}{4}$; fig 7. petal, x $3\frac{1}{2}$; fig. 8. pollinia, much enlarged.

TEUSCHERIA

cornucopia
Garay



as I proposed, but rather to the subtribe *Lycasteae*. In the generic description of *Teuscheria*, of course, I gave a clear description of the nature of pollinia: "Pollinia 4, cerea, inaequalia, visco parco cohaerentia, sine glandula". *Bifrenaria* is known to have a well developed stipe and gland. When I examined our material of *B. Pickiana*, I was unable to locate any stipe or gland. In one collection from Ecuador (Drew E-634), however, I found the reason for Schlechter's decision to refer this taxon to the genus *Bifrenaria*. *Bifrenaria Pickiana* has a large, triangular rostellum which breaks off very easily. When one examines Schlechter's original drawing, the prominent, triangular gland of the pollinia is clearly seen. The stipe, as depicted by Schlechter, is surely imaginary, and represents, very probably, only the viscid matter.

Bifrenaria Pickiana has always been perplexing to orchid taxonomists. It was described from cultivated material and was assumed to be native to Colombia. For a long while, nothing more was known about this species; then, unexpectedly, it appeared in a collection from Honduras. Later it was collected on a number of occasions in Costa Rica as well as in Mexico, Colombia and Ecuador. Dr. L. O. Williams, having seen living material of it from Costa Rica, decided that it should be included in the genus *Xylobium*, and he made the indicated transfer. This transfer, however, did not solve the placement problem of the species, because one of the generic requirements of *Xylobium* is that the inflorescence is always several-flowered. If the inflorescence is one-flowered only, the species would ordinarily be referable to the genus *Lycaste*. However, both *Xylobium* and *Lycaste* have pollinia with a very prominent stipe. *Bifrenaria Pickiana* was, therefore, still misplaced. With the detection of *Teuscheria cornucopia* and the additional species described in this paper, we at the Ames Herbarium believe that the proper disposition of *B. Pickiana* is in the genus *Teuscheria*.

Teuscheria Garay, in American Orchid Society Bulletin 27: 820, 1958.

Sepalum posticum inferum, a sepalis lateralibus omnino liberum; sepala lateralibus lata, basi pediculi columnae adnata, mentum fornicatum vel erectum calcariforme formantia. Petala sepalis inclusa et angustiora. Labellum sepalis inclusum, superum, involutum, trilobum, ad apicem

pedis columnae incurvum adnatumque et cum eo non articulatam. Columna brevis, crassa, basi in pedem longissimum apice incurvum producta; clinandrium vix evolutum, marginatum; rostellum valde productum, late triangulum. Pollinia 4, cerea, inappendiculata, visco parco cohaerentia, sine glandula. Ovarium genuflexum. — Herbae epiphyticae rhizomate abbreviato, nunc elongato. Pseudobulbi oblique pyriformes, unifoliati. Folium plicatum, angustum, petiolatum. Inflorescentia singula, lateralis, uniflora. Flos satis conspicuus, non resupinatus, a latere visus nonnunquam cornucopiam in mentem revocans.

CLAVIS SPECIERUM

- | | | |
|----|--|-----------------------|
| 1 | Lobus intermedius labelli lobis lateralibus aequilongus vel brevior; pseudobulbi aggregati | 2 |
| 1* | Lobus intermedius labelli lobis lateralibus duplo vel triplo longior; pseudobulbi remoti | <i>T. Pickiana</i> |
| 2 | Petala oblaneolata; margo labelli antice crenulata | <i>T. venezuelana</i> |
| 2* | Petala oblongo-lineares; margo labelli antice integra | <i>T. cornucopia</i> |

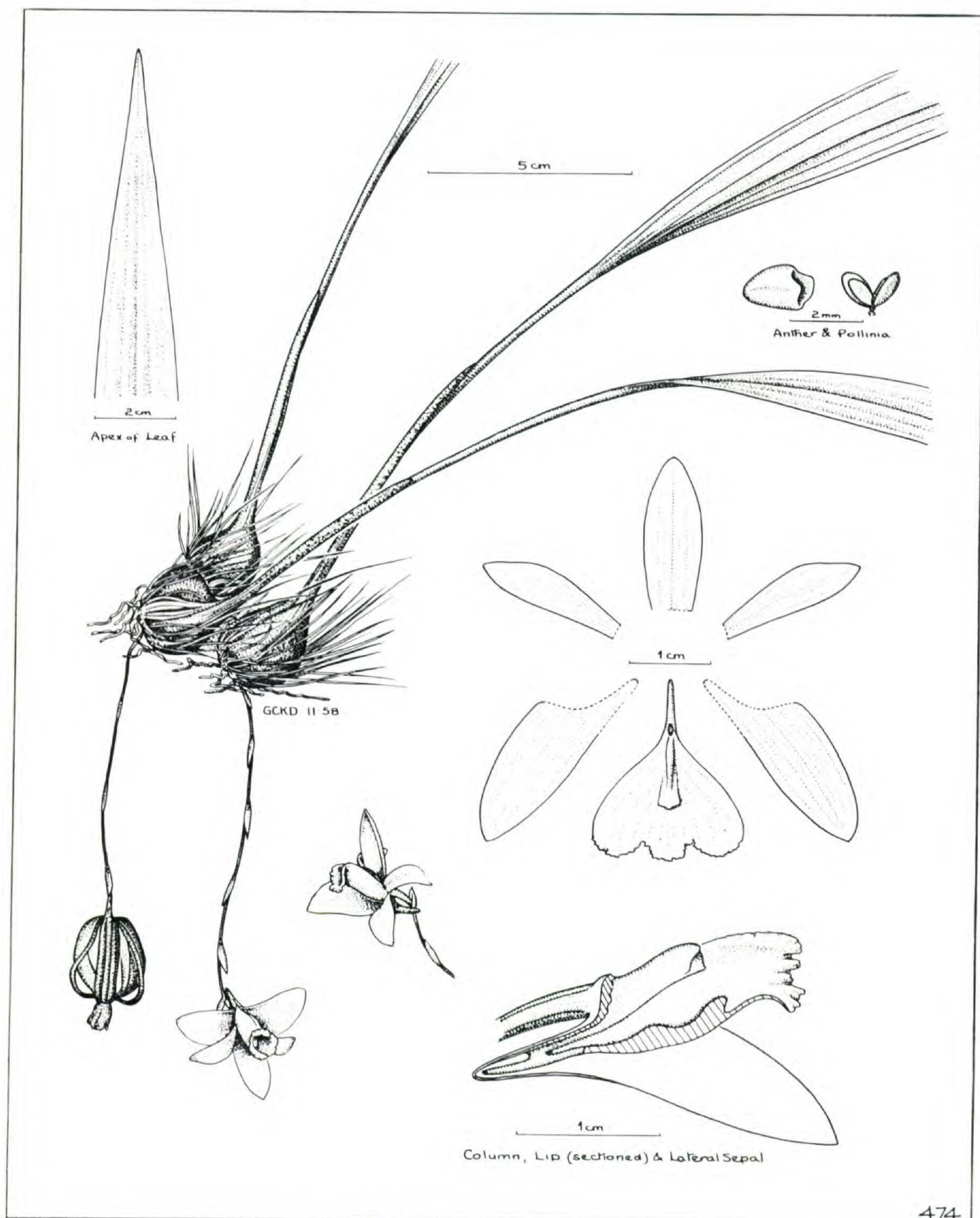
Teuscheria cornucopia Garay, in Amer. Orch. Soc. Bull 27: 820, 1958.

Epiphytica, caespitosa, usque ad 20 cm. alta; rhizomate valde abbreviato; pseudobulbis aggregatis, oblique pyriformibus vel ovato-pyriformibus, monophyllis, ca. 2 cm. altis; folio lineari-oblongo, plicato, prominenter 3-nervio, 15 cm. longo, 1 cm. lato; inflorescentia singula, erecta vel paulo arcuata, gracili, in medio univaginata, 4 cm. longa; flore nutanti, satis conspicua, a latere visu cornucopiam in mentem revocante; sepalo postico elliptico vel obovato-elliptico, apice obtuso, 5-nervio, 14 mm. longo, 7 mm. lato; sepalis lateralibus obliquis, oblongo-ovatis, apice acutis, 5-nerviis, 16 mm. longis, basi 9 mm. latis; petalis lineari-oblongis, apice acutiusculis, 5-nerviis, 10 mm. longis, 4 mm. latis; labello cuneato-flabellato, antice 3-lobo, lobis lateralibus rotundatis, lobo terminali reniformi, in medio leviter retuso, disco supra medium callo 3-dentato ornato, toto labello 16 mm. longo, 15 mm. lato; columna humili, crassa, dorsaliter 4 mm. alta, basi in pedem longissimum producta; ovario cum pedicello ca. 1.5 cm. longo.

Ecuador: Western slopes of the Andes. 100 km. from Guayaquil. Altitude about 3,000 ft., *H. Teuscher s.n.* (TYPE in the Ames Orchid Herbarium no. 69,265.) The plant from which the type was taken is cultivated in the collection of the Montreal Botanical Garden. The above description was prepared from living material.

Teuscheria venezuelana Garay, sp. nov.

Epiphytica, caespitosa, usque ad 35 cm. alta; rhizomate valde abbreviato; radicibus filiformibus, flexuosis, glabris; pseudobulbis oblique pyriformibus, unifoliatis, ca. 2.5 cm. altis; foliis lineari-oblongis, plicatis, apice acutis vel subacuminatis, basin in petiolum angustatis, usque ad



Teuscheria venezuelana Garay
 35 cm. longis, 2.5 cm. latis; inflorescentia singula, pendula, uniflora;
 pedunculo satis gracili, leviter arcuato, vaginis bracteiformibus remotis
 obsesso, ca. 7 cm. longo; sepalo postico oblongo-obovato, apice acuto

vel obtusiusculo, concavo, satis carnosus, 19 mm. longo, 7 mm. lato; sepalis lateralibus obliquis, oblongo-ovatis, apice acutis vel obtusiusculis, basi oblique decurrentibus, 25 mm. longis, 8 mm. latis; petalis oblique oblanceolatis, satis carnosus, apice acutis, 18 mm. longis, 5 mm. latis; labello cuneato-flabellato, antice trilobo, lobis lateralibus suborbicularibus, lobo intermedio haud producto, rotundato, disco a basi usque ad medium callo elevato, farinoso ornato; margine labelli antice crenulata; toto labello 22 mm. longo, antice 18 mm. lato; columna satis humili, crassa, basi in pedem longum producta.

Venezuela: Choroní Road, seaward slopes. Altitude about 5,000 ft., *G.C.K. Dunsterville 474* (TYPE in the Ames Orchid Herbarium no. 69,206.)

This description was prepared from living material. The color of the fleshy sepals and petals is bronze with a light maroon tinge; the lip is white with a diffused pink flush near the margin.

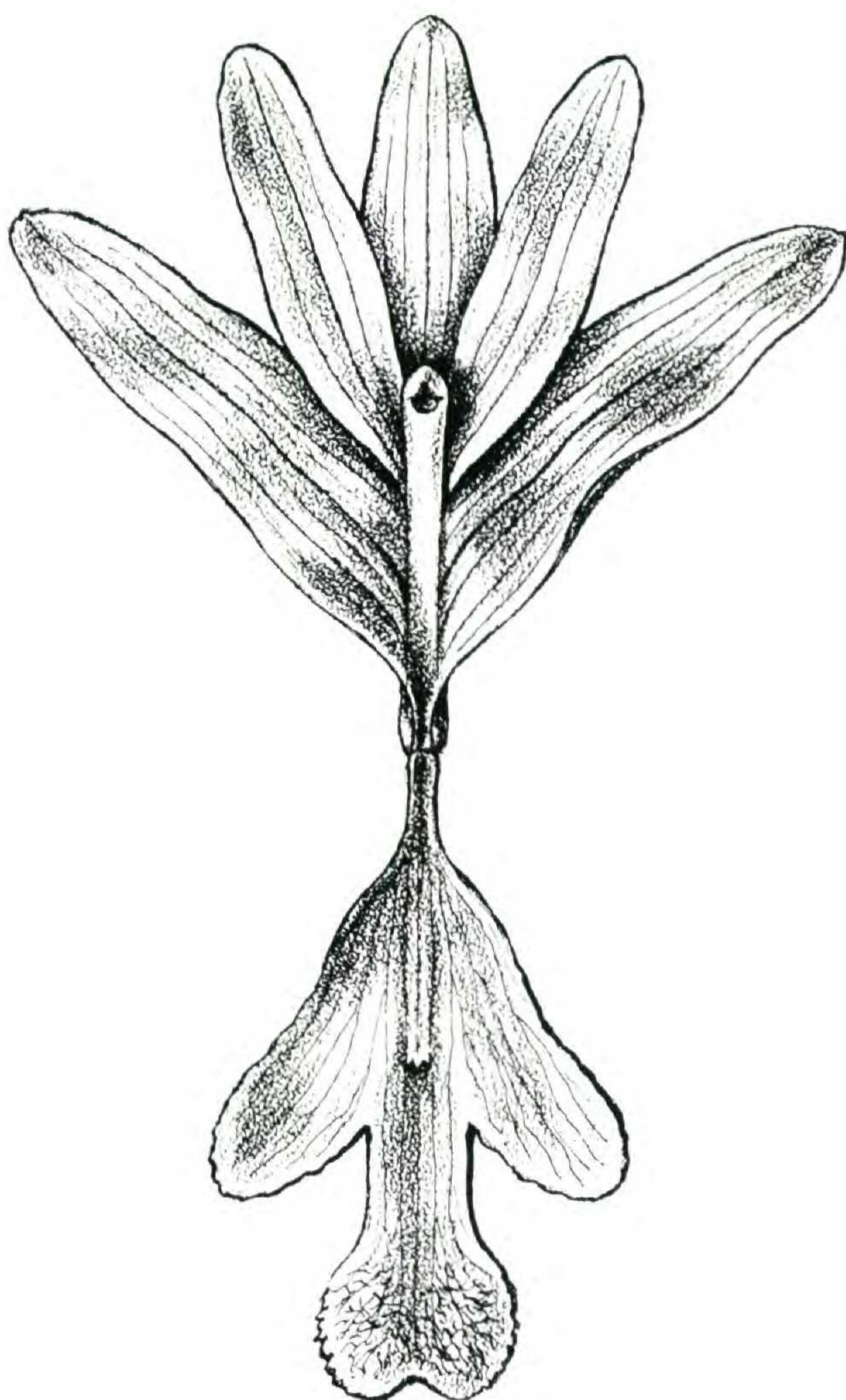
Teuscheria Pickiana (Schltr.) Garay, comb. nov.

Based on *Bifrenaria Pickiana* Schltr. in *Orchis* 6: 8, fig. 1, 1912. See also Mansf. in *Fedde Rep. Beih.* 58: t.49, Nr.196, 1930.

Xylobium Pickianum (Schltr.) L.O.Wms. in *Ceiba* 4: 271, fig., 1955; ibidem 5: 187, 1956.

Epiphytica, usque ad 65 cm. alta; rhizomate lignescente, elongato, flexuoso, cataphyllis imbricatis, jam emarcescentibus, fibrosis omnino oblecto; radicibus filiformibus, flexuosis, glabris; pseudobulbis satis distantibus, ovoideis vel oblique pyriformibus, cataphyllis scariosis demum fissis omnino oblectis, unifoliatis, 1.5–3 cm. altis; folio oblongo-ligulato, plicato, apice acuminato vel acutiusculo, basi in petiolum angustato, petiolo incluso 15–60 cm. longo, 1–3 cm. lato; inflorescentia singula, uniflora; pedunculo gracili, leviter arcuato, interdum reflexo (valde post anthesin), ca. 3 cm. longo; sepalo postico satis carnosus, oblongo-ellipticus, apice obtusus, 5–7-nervius, 12–15 mm. longo, 4–5 mm. lato; sepalis lateralibus oblique ovato-oblongis vel triangulari-oblongis, apice acutis vel obtusis, 5–7-nerviis, cum pede columnae mentum conicum, obtusum formantibus, 13–18 mm. longis, 5–7 mm. latis; petalis oblongo-ligulatis, obtusis, 3–5-nerviis, 12–16 mm. longis, 4–5 mm. latis; labello e basi cuneata trilobo, lobis lateralibus oblique oblongis, apice obtusis, lobo intermedio cuneato-subquadrato vel cuneato-flabellato, apice breviter exciso, lobis lateralibus duplo vel triplo longiore; disco in medio callo 3-dentato ornato; toto labello 15–25 mm. longo, inter lobos laterales 13–18 mm. lato; columna humili, crassa, basi in pedem longissimum producta; ovario cum pedicello ca. 4–5 mm. longo.

Mexico: Chiapas; limestone area, near Laguna Ocotal Grande. Altitude about 950 m., *R. L. Dressler 1629* (AMES). **Honduras:** in moist forest near Nacimiento del Río Lindo, Dept. Cortés. Altitude about 600



Teuscheria Pickiana (Schltr.) Garay

m., *Williams & Molina 14555* (EAP); Santa Cruz de Yojoa, Dept. Cortés. Altitude about 2000 ft., *Edwards 541* (AMES, NY). **Costa Rica:** region between Río Esquinas and Palmar Sur de Osa, vicinity of Esquinas Station, Prov. Puntarenas. Altitude ca. 30 m., *P. Allen 5584* (EAP); forested hills near Esquinas Station, vicinity of Río Esquinas, Prov. Puntarenas. Altitude ca. 60 m., *P. Allen 5688* (EAP); Río Blanco, North-east Cordilleras. Altitude ca. 1000 m., *F. C. Lehmann 1219* (AMES, G.). **Colombia:** Dept. del Valle, Cordillera occidental, Hoya del Río Digua. Altitude 900–1180 m. *J. Cuatrecasas 14901* (AMES). **Ecuador:** Prov. Imbabura, Cordillera occidental. Above Río Chalguyaco. Altitude about 4300 ft., *W. B. Drew E-634* (AMES). — ORCHID HERBARIUM OF OAKES AMES, BOTANICAL MUSEUM, HARVARD UNIVERSITY.